

## **Chapter I: Introduction**

### **Authority**

Carbon County intends to become a disaster resistant community by preparing and implementing this Pre-Disaster Mitigation/Community Wildlife Protection Plan. The plan identifies mitigation measures to be taken, guides the expenditure of funds, and raises awareness about the importance of taking personal and collective (public and private) action to prevent and prepare for reasonably for seeable natural disasters. The plan has been prepared utilizing funds supplied by the Bureau of Land Management supplemented by county match. The plan meets the requirements of the Interim Final Rule published in the Federal Register on February 26, 2003, at 44 CFR Part 201 as part of the Disaster Mitigation Act of 2000.

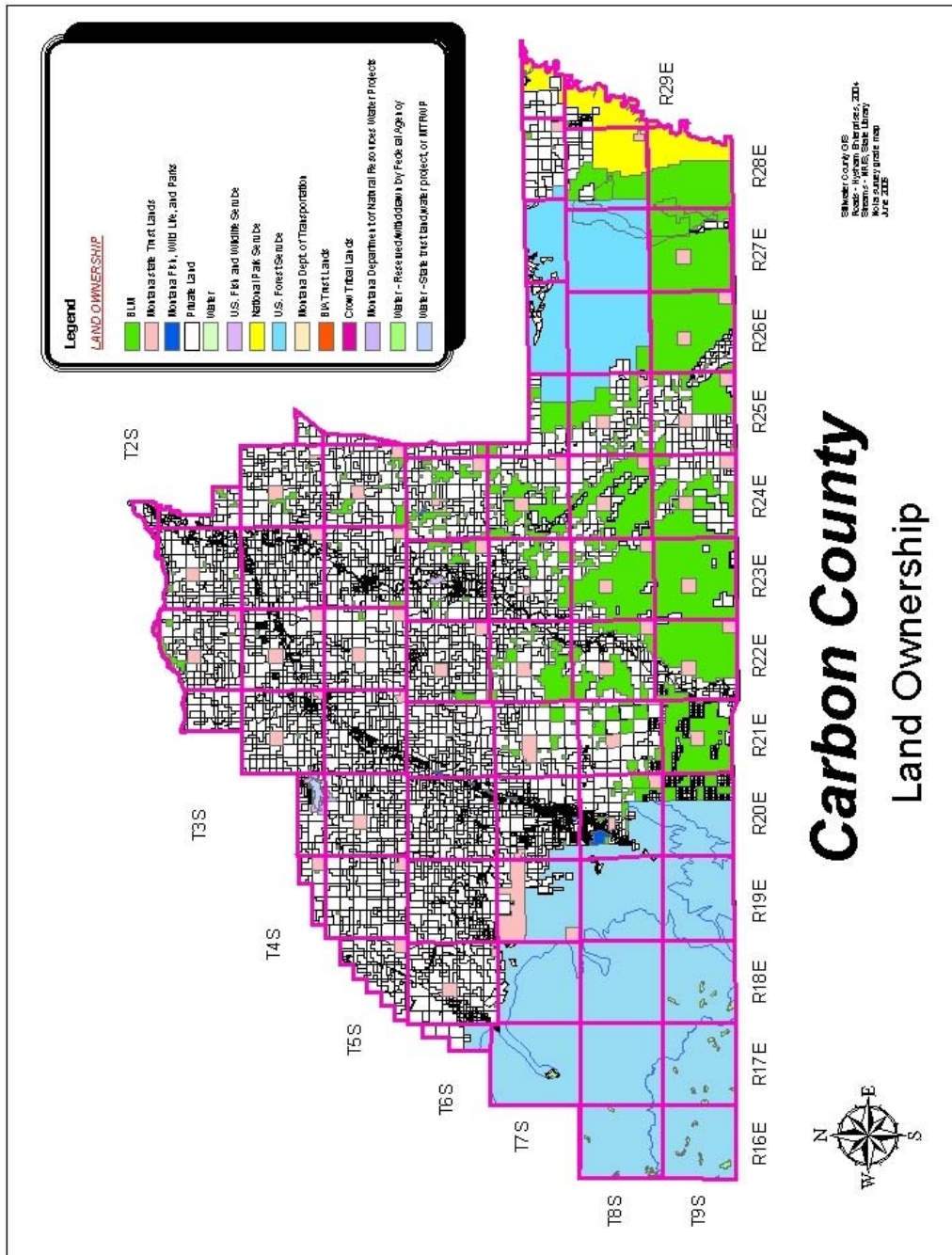
### **Project Area**

The project area for this plan is Carbon County, Montana. The county is located in south central Montana and includes approximately 1,313,859 acres. The county is home to 9,552 people. Carbon County is bordered by Park, Big Horn, Yellowstone, and Stillwater Counties in Montana, and Park and Big Horn Counties in Wyoming.

### **Land Use and Development Trends**

The county has tremendous diversity in elevation, topography, vegetation, and precipitation. Granite Peak, Montana's highest peak at 12,799 feet above sea level is situated on the western county boundary. By contrast, the lowest point in the county, in the northeast corner, has an elevation of only 3,300 feet. Approximately 55% of the land in the county (704,000 acres) is in private ownership, much of this in agricultural production. The size of the holdings of the remaining 45% of the land in the county is owned in descending order by the Forest Service, Bureau of Land Management, State of Montana, National Park Service, and U.S. Fish and Wildlife Service.

Public and private lands throughout the county are used in livestock (beef cattle and sheep) and hay production, both dryland and irrigated hay. The county produces sugar beets, wheat, barley, oats, dry beans, and corn. Cash receipts from the sale of principal agricultural products and government payments in Carbon County for the year 2001 were \$49,910,000. According to the 2003 Montana Agricultural Statistics, Carbon County had 623 farms averaging 1,181 acres each for a total of 735,910 acres in farms.



Public lands are primarily situated in the higher elevation Beartooth Mountains on the west side of the county, the Pryor Mountains on the east, and in the south central area of the county. Public lands are undeveloped with the exception of mineral production, recreational facilities, and dispersed range improvements.

The county contains five incorporated communities, Red Lodge, the county seat, Bear Creek, Bridger, Fromberg, and Joliet. There are also a number of unincorporated communities including; Belfry, Boyd, Edgar, Luther, Roberts, Rockvale, Roscoe, and Silesia. Forty-five percent of the population resides within the incorporated communities. Developed areas of the county cover approximately 1200 acres.

Residential development has been concentrated primarily along the Clarks Fork and Rock Creek valley bottoms adjacent to, but largely outside of the 100-year floodplains. Commercial uses in the county are generally located within the incorporated communities and/or along the state highway frontage.

Transportation infrastructure in the form of railroads, state highways, and highway bridges is concentrated in these two valley bottoms. County roads and bridges also move traffic across the valley bottoms and from the valley bottoms to the foothills and bench areas. Other than the significant pace of residential development associated with individual subdivisions--mostly in the southwestern area of the county, there are no major developments of land outside of existing communities. Carbon County has some small-scale manufacturing, but no major concentrated manufacturing or industrial areas.

Carbon County has no county-wide zoning in place. The county does have a Growth Policy and subdivision regulations. Development permits are required when a change of land use is proposed.

### **Climate and Weather**

“Carbon County has a continental climate, modified by the pattern and contours of the mountains, valleys, and plains” according to the USDA Soil Survey, Carbon County Area, Montana, 1975.

Consistent with the variation in elevation and topography across the county, precipitation ranges from over 70 to less than 6 inches annually. The heaviest precipitation occurs in the southwestern area of the county at higher elevations and much of the precipitation falls in the form of snow. The driest area of the county is situated just north of the Wyoming border, south of Belfry, in the south central portion of the county. (Beartooth RC&D Project, 1970) According to the Soil Survey, “The Belfry section of the Clarks Fork Valley, in the rain shadow of the very high mountains, is probably the driest section of Montana.”

In the winter, the precipitation falls as snow which accumulates in the foothills and mountains but generally melts off in the lower elevations in the central and northern portions of the county. Snowpack melting contributes to sustained runoff along all major streams. "Occasionally, heavy rains in late May or June coincide with periods of peak runoff, and about 1 year in 10 this combination causes some stream overflow." (Soil Survey, Carbon County Area, Montana, 1975)

The range in temperatures is also fairly large. Four weather stations located at Belfry, Bridger, Joliet, and Red Lodge monitor temperatures in the county. Monthly extreme averages have ranged from 20.0 degrees Fahrenheit in Belfry in January of 1974, to 70.5 degrees Fahrenheit in Bridger in July of 1933. The frost-free season at Red Lodge is about 104 days, but along the Yellowstone River on the northern edge of the county it can extend to 130 days. Carbon County is also situated so that it experiences Chinook winds which can drive winter temperatures upwards dramatically in a short period of time. Chinook winds can reach 75 miles per hour.

Sixty-two storm events are listed in the Storm Events Database of the Western Region Climate Center for Carbon County during the years 1950-2004. Carbon County has experienced extreme weather in all four seasons, from blizzards to rainstorms to hail to tornadoes.

## **Regional Economy**

The largest employment category in the Carbon County economy is that of services and professional workers. This is followed by the farm and agricultural services, and government categories. A small percentage of workers in the county are employed in the construction, manufacturing, and mining employment categories. Most of the jobs in the county are held by county residents, but county residents also commute to jobs in Yellowstone and Stillwater Counties. The Inventory of Existing Characteristics section of the 2001 County Growth Policy reports that 70% of all firms in the county have fewer than five employees. Consistent with Montana as a whole, many residents of Carbon County hold one or more part-time jobs. The unemployment rate in the county is typically lower than that of the state. Transfer payments (for example, retirement and government payments) as opposed to wages from employment make up a large share of the income of county residents.

The proximity of Carbon County to Billings, Montana's largest city means that goods and services are procured by Carbon County residents in Yellowstone County as well as in Carbon County. Billings provides medical care for those situations beyond local capability, offers the closest major airport, and houses prisoners from all Carbon County jurisdictions at the Yellowstone Correctional Department Facility.



## **Scope and Plan Organization**

This plan is organized into six chapters.

- Chapter I. Introduction

This chapter provides background material to put the plan and mitigation strategies in context.

- Chapter II. Planning Process

This chapter describes how the plan was developed including public involvement.

- Chapter III. Hazard Evaluation and Risk Assessment

This chapter gives information about historical disaster occurrences in the county then lists potential hazards, hazard profiles, critical facilities, and vulnerabilities. Chapter III also provides information about asset values, for example, how much the county courthouse, the town hall, or the municipal water treatment plant would cost to replace if it was lost in a disaster.

- Chapter IV. Mitigation Strategy

This chapter takes the hazard information and develops goals, objectives and projects that can be accomplished to lessen the chances and/or severity of a potential disaster. Recognizing the limitation of resources to accomplish all projects identified, Chapter IV also provides the priorities for the projects.

- Chapter V. Community Wildfire Protection and Mitigation

This chapter is organized into two major sections. The first section offers an assessment of wildfire risks, hazards, and values to be protected. It summarizes the county's capabilities to offer protection. The second section lays out the mitigation strategy, specifically the goals and objectives, and how the county has prioritized those goals and objectives.

- Chapter VI. Plan Maintenance

This chapter describes how this plan is to be kept current.

- Supporting materials include the Crosswalk Reference Document that displays in an easy to understand format how the plan meets current state and federal statutory requirements.